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# Aerial Delivery

Tri-Annual Publication For The Aerial Delivery Community

Volume 6, FEB 05

## Meet "The Father of the American Airborne"!

## Manufacturer's Week 2004

## Learn about Malfunctions!

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Published By Aerial Delivery Equipment Group, Integrated Logistics Support Center, Natick, MA

# Aerial Delivery Magazine - ADM

## Publisher's Corner

*Michelle Sullivan Team Leader for Personnel Parachutes and Mattox Turman Team Leader for Cargo Parachutes*

During 2004, the Aerial Delivery Equipment Group (ADEG) members performed admirably in initiating and managing several projects. These projects are now part of the group's history and the 2004 significant accomplishments will be chronicled in the Tank-automotive and Armaments Command's archives. There are four major projects or events that occurred in 2004 that are worth mentioning. First, a tremendous asset to the group and the Aerial Delivery community is the Aerial Delivery Magazine. The first Aerial Delivery Magazine was published in July 2003, with subsequent editions being published tri-annually. The magazines target audience is all military services as well as the Aerial Delivery civilian community, foreign and domestic. The articles comprise state of the art technological information regarding new personnel and cargo parachutes, Aerial Delivery Equipment forecast, manufacturer's delivery schedules, and a myriad of articles that are of interest to the Aerial Delivery community. The magazine has evolved into a prolific mechanism to illustrate the unique services the ADEG provides.

Another major project is Foreign Military Sales (FMS). The Aerial Delivery Equipment Group has taken its sales and sustainment services worldwide by providing personnel and cargo parachutes and equipment to foreign militaries. This is the third year the Aerial Delivery Equipment Group has worked in concert with the Security Assistance Management Directorate (SAMD), and the United States Army Security Assistance Command (USASAC) to provide Aerial Delivery equipment to Foreign Military personnel. Since this effort has been underway, Foreign Military Sales of Aerial Delivery equipment doubled from FY 2003 to FY 2004, and future sales look to be even more promising. This initiative is just another one of the Aerial Delivery Equipment Group's projects that is aggressively moving forward into FY 2005.

The new and improved ILSC SBC website was unveiled to the general public in October 2004. Completely redesigned, this website gives the world a look into the ILSC and how they support the Soldier. The website features all new graphics and color scheme and is a huge upgrade from its predecessor. The site is informational as well as a work tool. The quick news section provides links to current Army news that is updated weekly. It also contains links to each team at Natick, and information on the items we manage. Log on! You will not be disappointed. http://ilsc.natick.army.mil/

And last but not least, in October 2003, the ADEG, ILSC Natick hosted the first annual "Manufacturer's Week" at Fort Bragg, NC. The second annual "Manufacturer's Week" was held in October 2004, at Fort Bragg, NC. The 107 attendees included personnel from various Natick, MA organizations, numerous parachute component manufacturers, and personnel from the user communities. The purpose was to provide all parties the opportunity to observe U.S. Army soldiers using Aerial Delivery products (parachutes and related items), provide an opportunity to interact with the Soldiers to discuss mutual equipment issues and concerns, and provide manufacturers with a solid foundation for future Aerial Delivery product innovations and improvements. Plans are currently underway for the third annual "Manufacturer's Week" scheduled to take place in October 2005.

Fiscal year 2004 was an amazing year, and in highlighting these projects, it illustrates the Aerial Delivery Equipment Group's commitment to provide the very best equipment and support available to the war fighter.


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Submit your Airdrop photos to the *Aerial Delivery Magazine*, we could feature your photo on the Cover! e-mail at Michael.Maloney@natick.army.mil

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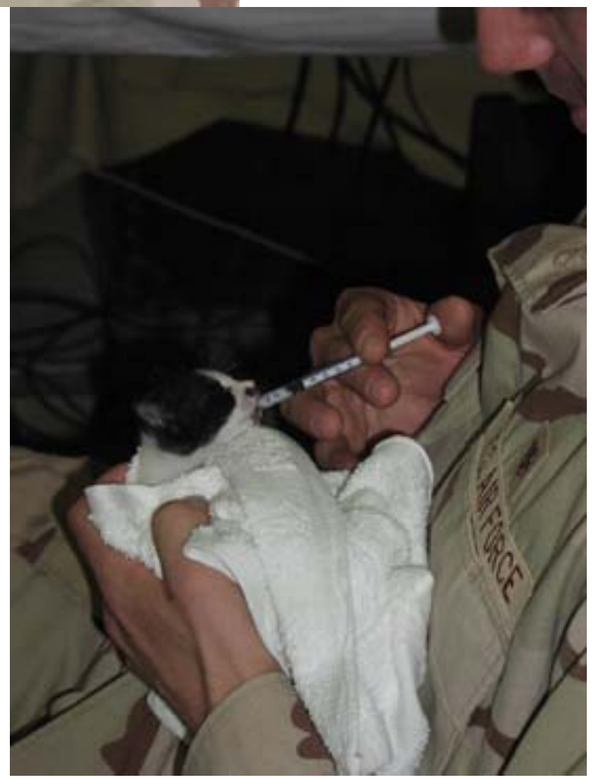
## Aerial Delivery Equipment Group Mission

**Provide streamlined, innovative and robust total life-cycle logistics and materiel readiness to DoD organizations, Foreign Military, and the Aerial Delivery community.**

*A sleeping stray pup with a sleeping soldier*

*An abandoned newborn kitten receives some tender loving care at the hands of a soldier*



*This pup was brought in after a convoy killed its mom*

*Bruno the bulldog and his beagle friend were brought by for a visit and a fashion show by the local animal shelter*

# Aerial Delivery Magazine - ADM

# Manufacturer's Week 2004

During the third week of October 2004, the Aerial Delivery Equipment Group, ILSC, SBC Natick, hosted the second annual Manufacturers Week at Ft. Bragg, North Carolina. A group of 107 people attended including personnel from various Natick organizations, numerous parachute component manufacturers, and personnel from the user communities. The purpose was to provide all parties the opportunity to observe US Army Soldiers using aerial delivery products (parachutes and related items), provide an opportunity to interact with the Soldiers and discuss mutual equipment issues and concerns, and provide manufacturers with a solid foundation for future aerial delivery product innovations and improvements. To achieve this purpose, attendees had the opportunity to visit several facilities and participate in a variety of activities.

HUMVEE rigged for an airborne operation

Facilities visited during the week included several rigging and maintenance operations, for both cargo and personnel parachutes.

Repairing a cargo parachute

For Cargo rigging, attendees visited the 1st Corps Support/ 82nd Airborne Division Heavy Drop Area of Operations. Here, participants not only observed the process of rigging cargo items, but a few were given the opportunity to assist, hands-on, in the packing procedure. Other participants were given a tour of the facilities and detailed descriptions of the packing and rigging processes.

For the personnel side of the house, attendees visited the 82nd Division Parachute Pack Facility. Here attendees observed riggers packing personnel parachutes used in static line operations. Participants closely watched the attention to detail taken by the riggers and their obvious pride in their work. A few lucky visitors had the opportunity to try on a packed main and reserve chute. The most surprising discovery was the sheer weight of the two parachutes on the jumper, which topped over 45 pounds combined.

Observed by the participants was a Pack-up and Pull-Down demonstration conducted on a volunteer Soldier. Participants were shown how a parachute, reserve and other necessary gear are placed on a Soldier. The chutes were then deployed, captivating the audience with thier fluidity and precision.

At the Special Warfare Parachute Rigging Center, the purpose of the facility to include rigging of freefall parachutes for the Special Forces was briefed. Riggers were observed packing chutes and volunteers were then outfitted in full gear including parachute, reserve chute, helmet and goggles.

Repair of both Cargo and Personnel chutes was observed at both the 600th/623rd Quartermaster Co. and Special Warfare Center Maintenance Facility.



# Photo Gallery

*Mr. Reid Squier provided pictures for this edition of the Photo Gallery. Mr. Squier spent three months in Kuwait working with the 386 Contingency Aeromedical Staging Facility (CASF), Ali Al Salem Air Base. Several of the "patients" who received care were animals. Some of the animals were found during missions, while the local animal shelters brought others. One even came by air transport. All were well cared for and many were adopted by the Americans treating them.*

*Military personnel care for Blackie, a military working dog, who was brought in by air transport.*

# Master Sergeant Mark Dickerson Departs The Aerial Delivery Equipment Group for Airborne Special Operations Community

With his promotion to Master Sergeant, Mark Dickerson has opted to return to the Airborne Special Operations Community where he served the majority of his 18 years of military service. Master Sergeant Dickerson has served in the 612th Quartermaster Company as well as the Joint Special Operations Command. He joined the TACOM Aerial Delivery Equipment Group in July of 2002 and departed in December 2004. During his tenure he served as the Senior Airdrop NCO, with the Aerial Delivery Equipment Group office in Fort Bragg, North Carolina. His expertise in Static Line, Military Freefall parachuting and Heavy Drop procedures was invaluable in the support of the group and its customers. Master Sergeant Dickerson not only utilized his technical expertise to answer customer's questions pertaining to aerial delivery functions but assisted customers in resolving supply problems by becoming familiar with the wholesale level of supply. He was instrumental in completing the review of all Technical Manuals for airdrop equipment. Master Sergeant Dickerson will be greatly missed by the Aerial Delivery Equipment Group and the customers he so proudly served.

MSGT Mark Dickerson is presented a picture of the Soldier Systems Center, Natick, MA by PSID Director Glenda Gillham

*Rick McDaniel is a logistics management specialist on the Aerial Delivery Equipment Group stationed at the Ft. Bragg, NC office*

# Technical Manual Updates

Revised and waiting at Tech Pubs
TM 10-1670-278-23&P Ch2
TM 10-1670-287-23&P

Process of complete revision/conversion to Word Format
TM 10-1670-276-23&P
TM 10-1670-280-23&P
TM 10-1670-281-23&P



Here, participants were able to see the expert hands-on repair of both personnel and cargo parachutes. It also gave participants the ability to see just how large and complex the parachutes are and the amount of effort put forth by those working their maintenance.

***"You cannot create experience. You must undergo it." -Albert Camus***

Activities during the week included a tour of a C-17 aircraft, observation of night-drop operations, an MRE lunch and for some, a jump from the 34-foot jump tower.

The tour of the C-17 aircraft was conducted at the Pope Air Force Base. After a short operations briefing in the passenger terminal, participants climbed into the back of the aircraft. For many, the first impressions of the aircraft was it's immensity and structure. Being accustomed to the "luxuries" of a passenger aircraft, the starkness and utility of the C17 was a humbling experience for some. A few brave participants' stood at the open jump door while others eagerly jumped into the cockpit for a brief chance at "flying" the aircraft.

A rigger at the Special Warfare Parachute Rigging Center

Sicily Drop Zone was the site of the late night airborne operation that was observed by all the participants. The operation included some cargo drops followed by a large personnel drop. For most this was a first time opportunity to see these operations live. Many described the unique experience as breathtaking and impressive.

Though not completely airborne related, a more interesting activity during the week was the MRE lunch. While watching "warthogs" planes land and take off, participants were treated to varieties of meals including Beef Stew, Thai Chicken, Spaghetti and Meatballs, Turkey Tetrazinni and Beef Enchilada. Once the mystery of heating them up was revealed, most enjoyed their distinctive lunch.

For several participants, the most thrilling activity of the week was the 34-foot tower jump. The 34-foot tower is used for training purposes during week two of jump school to include proper training in mass exit. All participants received a briefing and demonstration before those selected to jump on Monday evening were suited up, lined up and headed up the tower for their jumps. Once completed, all jumpers received a certificate of achievement dubbing them as honorary paratroopers.

Other visits of the week included a tour of the Military Free-fall Wind Tunnel Chamber and the Airborne and Special Operations Museum.

Only one of three in the country, the Military Free-fall Wind Tunnel is used as a training facility for Special Operations free fall personnel. Participants were provided with a briefing about the facility and then allowed to tour the tunnel where training was being conducted. After being given earplugs to block out some of the tremendous noise created by the tunnel, participants observed several trainees in yellow jumpsuits being coached by deftly floating trainers on proper free-fall techniques.

The Airborne and Special Operations Museum provided a unique educational experience including the history of U.S. Army airborne and special operations through photos, videos and displays. Greatly enjoyed by all the participants, this Museum also houses the Pitch, Roll, and Yaw Vista-Dome Motion Simulator. Several participants engaged in an extreme taste of what the Army's finest are trained to do. The 24-seat simulator physically moves a specially designed seating area up to 18 degrees in concert with a film.

# Father of Airborne

The illustrious sobriquet of “The Father of the American Airborne” is rightly rendered unto William C. Lee because of his dedication to making the U.S. Army into a dramatic new tactical and strategic military weapon in the period before World War II and to the eve of the invasion of France’s Normandy coast on June 6, 1944 — D-Day!

*William C. Lee*

His resolve during the late 1930s and early 1940 made it possible to create a new, modern fighting force of specially trained infantry — paratroopers, as they were quickly called. One of his and superior officers’ toughest tasks was changing the thinking of veteran army officers mired in old ways of waging war. Platoon-size units grew to company, battalion, regiment, and division strengths, later consolidated into corps and armies.

There are many notable names identified in the annals of World War II airborne parachuting — Gavin, Ridgway, Taylor, and the renowned General McAuliffe who replied “Nuts” to the German commander asking for the surrender of encircled 101st Airborne Division paratroopers in Bastogne, Belgium in December 1944.

By that date American military airborne forces had spent some five years building from a “what if” concept to a large, powerful, well equipped battle force of infantry-trained soldiers, backed by great stores of weaponry, equipment, and supplies, all deliverable behind enemy lines by parachute.

Lee was born in Dunn, North Carolina on March 12, 1895. He began his military association after he transferred to Wake Forest College in Winston-Salem,North Carolina in 1915. In two years there he played varsity sports and was president of his sophomore class. He next went to North Carolina State so he could enroll in the ROTC.He stayed at N.C. State until early 1917 and joined the U.S. Army as a second lieutenant. He married in June 1918, served 18 months in Europe as an infantry platoon commander, then as a company commander, and advanced in rank to captain. Back in the States, he completed schooling at N.C. State in 1920. He graduated the U.S. Army Officer School at Fort Benning, Georgia in 1922.

Lee had various assignments following “The Great War” (later known as “World War I”) including teaching at N.C. State, serving in Panama, and as a military observer in Germany. That defeated European country was not allowed to have an air force (though a limited self-defense army was deemed acceptable). However, Germany was permitted to teach its citizens nonpowered flight — ostensibly for their recreational benefit. The principles of flight, aircraft control, and maneuvering were taught using gliders and innumerable German soldiers learned flying along with civilian aviation enthusiasts. Following World War I, German officers were observers as U.S. and Russian military forces carried on parachutist training and practiced early concepts of tactical small-unit use of parachute-delivered personnel, supplies, and battle equipment.

Lee (now a major) quickly grasped the worth of swift-striking airborne forces and enthusiastically and persistently presented his ideas while assigned to the

***M-Week (from page 5)***

By the end of the long and busy week, each participant walked away brimming with positive and valuable experiences making the conference an overall resounding success. Plans are already underway for the third annual Manufacturers week with new activities to be added.

*Michelle Sullivan is the team leader for personnel parachutes on the Aerial Delivery Equipment Group*



considerations to build for, such as disproportionately large thighs, or very short torso, etc. Another way to account for that variation between men and women is to have different sizes of harnesses. Varying the distance between center of the yoke of the container and the base of the 3-Ring by one-and-a-half inches will differentiate each size.

Another benefit to women jumpers has been to lighten the load. As recently as 20 years ago the average harness/container system with main and reserve parachute weighed in at over 25 pounds. Today, these systems are now less than 20 pounds, and in turn have allowed more women to participate in the sport.

Additionally, there is now an increase of available color choices of parachute equipment. Drab colors have been replaced with a wide variety of choices including pinks and purples.

With all of the changes in parachute equipment, it is certain that more women will enter the sport and feel safer and more comfortable.

*Michelle Sullivan is the team leader for personnel parachutes on the Aerial Delivery Equipment Group and Safiya Bowerbank is a Logistics Management Specialist on the Aerial Delivery Equipment Group, also contributions from Nancy LaRiviere president of Parachute Labs and an experienced skydiver*

***In dedication for the hard work that riggers provide to the airborne community.***

***Rigger’s Pledge***

*I will keep constantly in mind that until men grow wings their parachutes must be dependable.*

*I will pack every parachute as though I am to jump with it myself, and will stand ready to jump with any parachute which I have certified as properly packed.*

*I will remember always that the other man's life is as dear to him as mine is to me.*

*I will never resort to guesswork, as I know that chance is a fool's gold and that I, a rigger, cannot depend on it.*

*I will never pass over any defect, nor neglect any repair, no matter how small, as I know that omissions and mistakes in the rigging of a parachute may cost a life.*

*I will keep all parachute equipment entrusted to my care in the best possible condition, remembering always that little things left undone cause major troubles.*

*I will never sign my name to a parachute inspection or packing certificate unless I have personally performed or directly supervised every step, and am entirely satisfied with all the work.*

*I will never let the idea that a piece of work is "good enough" make me a potential murderer through a careless mistake or oversight, for I know there can be no compromise with perfection.*

*I will keep always a wholehearted respect for my vocation, regarding it as a high profession rather than a day-to-day task, and will keep in mind constantly my grave responsibility.*

*I will be sure-always.*

# New Parachute Equipment Benefits Women Sport Jumpers

When sport parachuting first emerged, many women did not participate as the equipment did not fit well, nor was the weight of the equipment manageable. However, recent changes in sport parachute equipment have been very beneficial for women jumpers.

The first and most important hurdle for women jumpers is the difference in body shape from their male counterparts. Statistically speaking, many women jumpers are smaller in stature than their male counterparts (The average male shoulder width is slightly greater than 17, a women's is 16 inches). As a result several manufacturers are now creating new equipment designed for a better fit. "By producing a harness that has a more snug fit, means greater safety and comfort for a woman jumper" according to jumper Nancy LaRiviere, an experienced female jumper with over 5600 jumps under her belt.

Nancy LaRiviere performing a tandem parachute jump

A challenge faced by one company in meeting a smaller jumpers needs, was to reshape the container so that it was so narrow as to not extend beyond the sides, short

Nancy LaRiviere performing a parachute jump

enough to accommodate a smaller back, yet thick enough to easily contain the canopies. Additionally, the yoke also needed redesign of the rig so that it would come straight over the shoulders and not angle out to the sides as most rigs have a tendency to do.

Proper placement of the chest strap in women jumpers also posed a concern. It is essential that the strap be comfortable and not compromise safety in any way. Simply putting a chest strap in a low location doesn't work for many individuals. LaRiviere agrees, "For one, when the chest strap is lowered, you automatically lower the reserve ripcord and cutaway handles (all sport rigs have cutaway handles). If the reserve ripcord handle is located too close to the hip junction, the handle will often get pushed out of its pocket when the wearer sits down. Because that stiffened junction is putting pressure on the bottom of the handle, you need a critical amount of slack below the handle on the main lift web." In an effort to combat this problem, custom designed ultra-short ripcord handles have been created. "An extra inch of slack makes a world of difference in making sure your ripcord stays where it supposed to be."

Another way to better fit the female jumper is to have different sizes of harnesses available. When measuring for a harness, height, weight, inseam, chest, waist, hips, thigh, back, and shoulder width need to be taken into consideration. Other measurements will indicate if there are any unusual



Chief of Infantry's staff in Washington, D.C. He ultimately became the U.S. Army's foremost proponent for American parachute and glider-borne infantry units as a new form of warfare.

By early 1940 military commander-in-chief President Roosevelt ordered high-priority development of a large airborne force. Major Lee was given that assignment and wasted no time. In July 1940, he directed formation of a Parachute Test Platoon to test equipment, training methods, and tactics for parachute troops. In three fast-paced months it was possible to activate the 501st Parachute Infantry Battalion.

On May 20, 1941, Germany — had been long and diligently training parachutists ("fallschirmjaegers") — stunned the world by making a huge parachute, glider, and sea borne assault on the Greek island of Crete in the Mediterranean Sea, located between Africa and Europe. Tough parachutists spearheaded the attack, jumping in multiple mass formations. It was the first time a major island had been primarily captured by parachute forces. The Germans captured Crete at an extraordinarily high cost in parachute personnel, so much so that Adolf Hitler prohibited further massive parachute assaults. His military planners rushed their efforts and many errors were made in conducting battle operations. German errors were carefully noted by Allied military forces, who continued developing airborne forces successfully.

In less than a year Bill Lee's intensive efforts continued. Three additional parachute battalions were formed as a Provisional Parachute Group at Fort Benning, Georgia.

By March 1942 (Lee was now a lieutenant colonel) — with World War II underway — the Group was reorganized and three regiments (three battalions each) were added and the Airborne Command was created, led by one-star general Lee. Later, the U.S. Army activated two airborne divisions, the 82nd and the 101st.

Lee was given command of "The Screaming Eagles" 101st Airborne Division and promoted to the rank of two-star major general. During the activation ceremony Lee noted: "This division has no history, but it has a rendezvous with destiny." Following a year of intensive, realistic training, the 101st went to England to keep that rendezvous, starting with the massive June 6, 1944 invasion of the Normandy region of France and on through the end of the war in Europe in May 1945. The Screaming Eagles continue today as an outstanding and effective "high-speed" military force for America.

William C. Lee's dedication to developing airborne forces made it possible for a concept to advance from two battalions of several hundred parachutists to divisions of several thousand each, all in two years, resulting in his promotions from a gold-leaf major's rank to two silver stars of a major general.

Unfortunately, General Lee — the oldest parachute-qualified officer in the army — could not go into combat with his troops. He had a heart attack on February 5, 1944 as Allied planning for the invasion of the continent was nearing completion. His health worsened and he had a second serious heart attack, greatly disabling him. But his vision persevered and he kept working hard. He was later medically retired from the army, continuing to serve as an airborne advisor to the United Nations international organization until his death in June 1948 at age 53.

William C. Lee's vision prevailed and U.S. Airborne forces did much to end World War II. Since then, American parachute forces continue in the form of large and small units, as a potent military weapon in special operations units of several U.S. military branches, according to mission needs.

Lee has been honored many times. His home in Dunn, 25 miles north of Fayetteville, has been transformed into an airborne museum; the town has named a street for him; a residential area at Fort Campbell, Kentucky bears his name, as does an athletic field house at Fort Bragg; in Tokyo, Japan the 11th Airborne Army named a city byway "General Lee avenue"; and his N.C. State alma mater named a building "Lee Dormitory" and the school annually presents the "General Lee Military Scholarship" to the outstanding ROTC cadet.

Lee occupies an eminent position in the "Airborne and Special Operations Museum" on Bragg Boulevard in Fayetteville, North Carolina. The museum is part of the U.S. Army Museum system and tells the story of the Army airborne and special operations from 1940 to the present.

*We are proud to feature articles by the renowned para-historian Jim Bates. His articles featured in this magazine provide a historical perspective on the evolution of Aerial Delivery.*

# The Tri-Annual Malfunction Review and Safety Analysis Board

"Everything about the airborne operation up to the point of exiting the aircraft was considered to be normal and uneventful. Shortly after exit, the number 8 jumper became towed. The jumpmaster immediately identified that he had a towed jumper and relayed the information to the safety and pilots. The jumper was not towed by anything other than his static line and parachute, and after confirming that he was coherent and in a good body position, the jumpmaster team made the decision to cut him away."

This is an actual account of a Malfunction submitted and reviewed during a recent Malfunction Review and Safety Analysis Board held at Fort Lee, VA.

***"The Malfunction Review and Safety Analysis Board purpose is twofold: analyzing airdrop and personnel parachute malfunctions to prevent recurrences, and reviewing current doctrinal, procedural and maintenance issues. And it's working."***

The result of a Heavy Equipment Airdrop Malfunction

According to AR 59-4 / AFJ 13-210(I), "The USAQMC&S Aerial Delivery and Field Services Department will host a Tri-annual meeting for representatives from airdrop units throughout the Department of Defense…The meeting will consist of as a minimum, but not exclusively to the following topics: presentations of new systems or procedures pertinent to the airdrop community as a whole; presentations of previous malfunctions/incidents; review and analysis of malfunctions/incidents; and presentation of findings."

The Malfunction Review and Safety Analysis Board purpose is twofold: analyzing airdrop and personnel parachute malfunctions to prevent recurrences, and reviewing current doctrinal, procedural and maintenance issues. And it's working. Since 1966, malfunction rates for cargo equipment airdrops have decreased from 1.48% to 0.37% in 2003. Personnel airdrop malfunctions show a similar pattern, decreasing from 0.20% in 1966 to just 0.01% in 2003.

In addition, the MRB is also a great forum to improve joint relations through dialogue, and share information throughout the airdrop community. In order to ensure cohesion between all service components during future air drop missions, attendees are encouraged to share the issues and topics discussed at the MRB with service members involved in airdrop missions once they return to their unit. One easy way to do this is to share the slide show presentation that the Aerial Delivery and Field Services Department provides at the MRB. The presentation (in CD format) contains Malfunction Reports submitted by units since the previous MRB, slides from guest speakers, analysis summaries of previous airdrop malfunctions and incidents, and other pertinent information. Although frequent guest speakers includes members from HQ AMC, TACOM - ILSC, and DDSP - New Cumberland, field unit representatives are encouraged to present briefings on important airdrop issues or unit support roles.



# Foreign Military Sales On The Rise

Foreign Military Sales (FMS) numbers are in for FY-2004, and the Aerial Delivery Equipment Group (ADEG) experienced a phenomenal increase. The FMS program provides a mechanism through which Foreign Governments purchase defense materiel and services from the U.S. Government. Sales of aerial delivery support equipment to Foreign Militaries have proven to be the catalyst for the surge.

A possible FMS case begins when a Foreign Government requests "price and availability information" on United States products it is interested in purchasing.

Prior to August 2003, FMS requests were filled as received in accordance with the requestors stated requirements. However, this philosophy changed when requisitions were received for main personnel parachutes without requesting reserve parachutes. This was an unusual request and concerned the ADEG office as to whether Foreign Governments were procuring everything required to safely conduct Airborne Operations. An ADEG representative requested a meeting with the Tank- automotive & Armaments Command (TACOM), Security Assistance Management Directorate (SAMD) office who provide logistical support for TACOM managed equipment provided to Foreign Militaries.

*The T-10D is a popular item for Aerial Delivery FMS*

During the initial meeting, emphasis was placed on the inherent dangers associated with airborne operations, the use of proper equipment to minimize risk, and the importance of requesting technical support.

Additionally, a meeting was held with the United States Army Security Assistance Command (USASAC), who is responsible for all Army managed equipment requests by foreign militaries. During the meeting, it was apparent that several attendees were not aware of the mission of the ADEG, which is to provide streamlined, innovative and robust total life-cycle logistics and materiel readiness to DoD organizations, Foreign Militaries, and the Aerial Delivery Community as well as identify all equipment required to perform safe airborne operations. Basically, the Aerial Delivery Equipment Group serves as an intermediary, providing assistance regarding procurement, logistics, delivery, and often providing product support and technical support.

After conducting the meeting all parties left with a better understanding of the process. Due to the remarkable efforts of the USASAC, SAMD office and the ADEG, all issues regarding payment, shipment and export licenses are resolved prior to contract award. The ADEG is committed to providing state of the art equipment and support services to all our customers foreign and domestic, and we look forward to an even better 2005.

*Frank Svoboda is an Item Manager and POC for FMS on the Aerial Delivery Equipment Group and Mattox Turman is the Team Leader for Cargo Parachutes*

***Spotlight Feature- ILSC Shelter's Team***

***Solar Shade (from page 15)***

unexpected problems with the master batch chemical processing used to create the polypropylene yarn. The yarn is the basic building block for the special knitted fabric. Over the next few weeks, the fabric vendor was successful in modifying the chemical processing and production rates began to increase to over 60,000 square yards per week. The aluminum pole vendors had little trouble meeting the government schedule and within 90 days, produced over 30,000 poles. The first 128 Solar Shade systems were delivered to the government 42 days after contract award, and more than 2,000 systems were delivered within 90 days of contract award.

Through extensive coordination with numerous agencies, the Team was able to expedite shipment of 3,000 systems to the CENTCOM AOR. The shipping time from the commercial vendor to Kuwait via New Cumberland and Dover AFB averaged four to five days per shipment. The Team's desire to support the Warfighter and the great partnership developed with numerous commercial and government agencies enabled this mission to succeed.

*Don Reedy is the Shelters Team Leader and Steve Nye is the Solar Shade/System Project Leader.*

# The Solar Shade System

Description:

- This is a new complete system that includes: (fly/cover, poles, stakes, rope, repair kit)
- Lightweight fabric, open weave material
- Complexible/modular to cover multiple shapes and sizes
- Pole supported: (aluminum, telescoping)
- Reduces solar effects by 60%
- Vehicle drive through capability
- Floor area Type I: 1225 sq. ft.
- Floor area Type II: 2500 sq. ft.

Erection:

Type I, two soldiers - 30 minutes
Type II, two soldiers - one hour

| NSNs: | | Price: |
|---|---|---|
| Type I: 5410-01-519-7041 | 35ft X 35ft | $2,363.00 |
| Type II: 5410-01-519-7185 | 50ft X 50ft | $4,026.68 |

RIC: A12

Supply Class: II

Availability: Procure with funded requisitions through normal DOD supply system. Current stock on hand at New Cumberland (AN5) is over 200 Type I and 500 Type II.

Materiel Command: TACOM ILSC SBC Soldier PSID

POCs:

Shelters Team Leader: Don Reedy, DSN: 256-5642, COM: 508-233-5642
Item Manager: Donna Scotland, DSN: 256-6005, COM: 508-233-6005
Subject Matter Expert: Steve Nye, DSN 256- 4589, and COM: 508-233-4589



# Fought On Two Fronts

Joseph R. Beyrle, 81, passed away in his sleep on December 12th, 2004. You ask, "Who was Joseph R. Beyrle and what does he have to do with parachutes?"

Joseph R. "Jumpin Joe" Beyrle was a Sergeant with the 506th Parachute Infantry Regiment, 101st Airborne Division. A hero to two nations, he is the only known Soldier to have fought against the Nazis with both the American and Soviet armies during WWII. He had more actual combat time with the Russians than he did with Americans.

*Joseph R Beyrle*

Prior to D-Day he had already parachuted into France twice with gold for the French Resistance. Then, on the night of June 5th, 1944 Joe jumped into Ste Come Du Mont, Normandy as part of the D-Day invasion force. Landing on a church roof while under fire from the Germans, he managed to slide down and make his way toward his objective. After blowing up a power station in combat with the enemy he was captured and interrogated. After approximately four months of being moved through seven temporary POW camps, beaten and starved, escaping twice and being recaptured, he was finally registered as a POW. After being captured he was allowed to write a post card to his family. His family thought he was dead because his dog tags were found on a body on Utah Beach (later presumed to be a Nazi agent) and the War Department

***MRB (from page 8)***

As with any recurring mandatory meeting and conference, many people become reluctant to attend the tri-annual MRB. They think it will be a waste of time to attend every board because the information will be redundant. However, while it is true that some situations warrant follow-ups from one board to the next, there is always new and important information that needs to be shared since the previous MRB. Every Airdrop and Airborne unit should make it a priority to send a representative to every MRB, especially if that unit has recently submitted a DD Form 1748-2 for either personnel or equipment malfunctions and/or incidents. In fact, one of the biggest problems found at the MRB is that there are always some Airdrop Malfunction Reports that lack enough information to properly analyze and present the findings of the malfunction or incident. If a representative from that unit is present at the MRB, and has personal knowledge of the malfunction or incident, the analysis can then be completed without delaying the process. It can get frustrating when reviewing a Malfunction or Incident and the only determination that can be made at the time is that "there is not enough information" on the DD Form 1748-2. It gets even more frustrating when there is no unit representative present to supply the information needed for a proper analysis.

At the next scheduled MRB, sign up to be a guest speaker on an airdrop related issue, ask questions of other speakers, express your expert opinion, and most importantly share your knowledge. Remember, the United States Military's Airborne Community consists of all branches of service in the Department of Defense. By being an active contributor to the Tri-Annual Malfunction Review and Safety Analysis Board you are doing your part in helping to ensure our Airborne service members continue to be the best, and safest, in the world.

For more information on the MRB, go to the Aerial Delivery and Field Services Department home page at: http://www.quartermaster.army.mil/adfsd/ and click on the MRB Pre-Registration Form link to sign up for the next board. After you complete the registration form please remember to download and print out the Malfunction Packet to bring with you to the board. To present at the MRB, put together a few slides using PowerPoint to highlight the key points of your briefing and submit it to the Aerial Delivery and Field Services Department at Fort Lee, VA by contacting MSgt Johnson at Bradford.r.Johnson@lee.army.mil, several weeks prior to the board dates.

*SFC Mark Hearn is a Quality Assurance NCO with the Aerial Delivery Equipment Group*

had him officially listed as killed in action. His parents even had a memorial service for him. On his third escape attempt he was successful. Escaping from the Stalag 3-C POW camp at Alt Drewitz in January 1945, he determined his best chances lay in making contact with Soviet troops fighting the Germans in that area. After three days a Russian armor unit came into the farmyard where Beyrle was hiding in a barn.

***There he was, an American escaped POW on an American Sherman tank serving with the Soviet Army.***

Raising his hands he called out to the Russians in the only Russian he knew "Americanski Tovarish" - American comrade. He identified himself to the Russian commander as an escaped American POW that wished to join them in their effort to go into Berlin and kill Nazis. After the Commander consulted with the Commissar, and Beyrle proved his usefulness with demolition devices, the commander gave Beyrle a weapon and allowed him to accompany them. There he was, an American escaped POW on an American Sherman tank serving with the Soviet Army.

During the next three weeks Beyrle fought with the Russians in very heavy fighting, even liberating the POW camp where he was once held. Here he regained his POW record and picture. One morning while being attacked by Stuka dive-bombers he was blown off his tank and wounded. While recuperating in a Russian hospital in Poland, he was visited by Marshall Georgi Zhukov (Marshall of the Soviet Union) who provided Beyrle a letter identifying him and ordering help to get him to Moscow.

Arriving in Moscow, Beyrle found that his trials were not over. It seems that the War Department still had him listed as killed in action. After many interviews and convincing the U.S. Embassy to take his fingerprints to confirm who he said he was, Beyrle's identity was finally established, his records corrected, and he was on his way home.

After a long recuperation and celebrations at home in Muskegon, Michigan he was sent to a military hospital for further treatment. He was honorably discharged on November 28, 1945 for disabilities incurred while in service.

Not wanting to languish in death or fade away in a nursing home, Joe Beyrle always said, " When I go, I want to drop and skid along the ground." "He came close - Only Normandy would have been more appropriate," said his son, John Beyrle, deputy chief of mission at the U.S. Embassy in Moscow. "Jumpin Joe" will be buried in Muskegon, MI , and his remains will be transferred to Arlington National Cemetery for a military burial in the spring.

A footnote:

After completing his five qualifying jumps to get his wings, Beyrle hired himself out at five dollars per jump to others who had completed four of their jumps. Rather than take the chance at injury on their fifth jump and being sent to the "leg" infantry, they would hire Beyrle to make their fifth jump for them. Beyrle was discovered and his cadre made him do 100 push-ups for punishment. He quit this practice while he was ahead, but not before earning $100 and jumping out of planes the first 40 times he rode in them. This and his accomplishment of promoting changes in jump procedures earned him the title "Jumpin Joe".

*Frank Cruikshank is an Equipment Specialist for the Aerial Delivery Equipment Group*

Submit your Airdrop photos to the *Aerial Delivery Magazine*, we could feature your photo on the Cover! e-mail at Michael.Maloney@natick.army.mil



***Spotlight Feature- ILSC Shelter's Team***

*The Aerial Delivery Magazine will now include a spotlight feature article submitted by commodity teams within TACOM ILSC Natick. This editions' spotlight is on the Solar Shade, an item managed by the TACOM ILSC Shelters Team.*

# Shade for the Soldier

For decades, our Armed Forces have operated in extreme temperatures of a desert environment. The harsh solar load of this setting places severe temperature on our Warfighters and the equipment they operate. With today's technology and determination to support our Warfighter, we can now provide "Shade for the Soldier".

*Type I Solar Shade*

Recently, under short notice, the TACOM ILSC Shelters Team was tasked to fill the vital need for Solar Shades. The Team immediately partnered with the RDECOM Natick Soldier Center and Acquisition Center to initiate the urgent procurement of 4,500 Solar Shades. Within days, the Natick Team awarded seven contracts consisting of two fabric vendors, two pole and disk vendors, and three integration vendors.

*Type II Solar Shade*

With the hot summer months fast approaching, the Team had little time to waste. Working closely with the vendors, the Team coordinated the flow of fabric, poles, and disks to the integrators. From the beginning, the knitted fabric became the "long pole in the tent", with numerous production delays due to

# Aerial Delivery Equipment Group Delivery Schedule

| NSN | NOUMENCLATURE | QTY | SCHEDULE |
|---|---|---|---|
| 1670000867780 | PACK,PERSONNEL PARA | 4974 | Jan-Sep 05 |
| 1670004002771 | CONNECTOR,PARACHUTE | 100 | Jun-05 |
| 1670007334883 | DEPLOYMENT BAG,PARA | 1174 | Mar-05 Feb-06 |
| 1670007533928 | PAD,ENERGY DISSIPAT | 9955 | Jan-Sep 05 |
| 1670008924218 | PARACHUTE,RESERVE,P | 201 | Jan-Feb 05 |
| 1670009370271 | TIE DOWN,CARGO,AIRC | 55000 | Apr-05 Nov-06 |
| 1670010087755 | SLING,CARGO,AERIAL | 977 | Feb-Oct 05 |
| 1670010167841 | PARACHUTE,CARGO | 1359 | Jan-05 Aug-06 |
| 1670010272900 | SLING,CARGO,AERIAL | 2275 | Jan-05 Jun-06 |
| 1670010583810 | NET,CARGO,AERIAL DE | 161 | Feb-05 |
| 1670010653755 | PARACHUTE,CARGO | 400 | Mar-Oct 05 |
| 1670010978817 | RELEASE,CARGO PARAC | 50 | Mar-05 |
| 1670010992380 | TIMER DELAY ASSEMBL | 599 | Jan-May 05 |
| 1670011077651 | LINE,MULTI-LOOP | 522 | Feb-05 |
| 1670011622367 | RAIL TYPE V | 56 | Feb-05 |
| 1670011622370 | RAIL TYPE V | 207 | Jan-May 05 |
| 1670011622372 | CLEVIS ASSY | 65000 | Jan-05 Aug-06 |
| 1670011622382 | ROLLER PAD | 803 | Feb-Mar 05 |
| 1670011832678 | LEAF,EXTRACTION LIN | 2500 | Jan-Sep 05 |
| 1670012477151 | CANOPY,PERSONNEL PA | 2600 | Jan-Sep 05 |
| 1670012721901 | HARNESS,PERSONNEL P | 2456 | Jan-Apr 05 |
| 1670013043006 | PANEL ASSEMBLY,MAIN | 300 | Feb-05 |
| 1670013062100 | PARACHUTE,PERSONNEL | 1650 | Jan-05 Dec-06 |
| 1670013303279 | CANOPY,PERSONNEL PA | 622 | Jan-05 Jan-07 |
| 1670013303280 | HARNESS,PERSONNEL P | 125 | Jan-Aug 05 |
| 1670013303741 | LOOP,CLOSING,MAIN | 6400 | Jan-05 Mar-06 |
| 1670013303742 | LOOP,CLOSING,RESERV | 11700 | Jan-05 Dec-06 |
| 1670013303743 | RIPCORD,MAIN RELEAS | 520 | Jan-05 Apr-07 |
| 1670013303744 | SLIDER,DOME-LIPPED | 310 | Feb-06 May-07 |
| 1670013303745 | LINES,CONTROL | 530 | Jan-05 Mar-08 |
| 1670013303747 | PILOT CHUTE,MAIN | 1625 | Jan-Jul 05 |
| 1670013323916 | CANOPY,PERSONNEL PA | 1387 | Jan-05 Oct-09 |
| 1670013347597 | DEPLOYMENT BAG,PARA | 330 | May-05 Mar-06 |
| 1670013427686 | DEPLOYMENT SYSTEM,R | 305 | Apr-05 Jul-06 |
| 1670014842234 | PARACHUTE,PERSONNEL | 3326 | Jan-Jun 05 |
| 1670014936418 | LINK ASSEMBLY,SMALL | 1599 | Apr-Oct 05 |
| 1670015039822 | REFURBISH KIT,CRA | 4000 | Jan-Apr 05 |
| 4020010476814 | FIBER ROPE ASSEMBLY | 1500 | Feb-Sep 05 |
| 4020010476815 | FIBER ROPE ASSEMBLY | 1700 | Jan-Aug 05 |
| 4030006788560 | SHACKLE | 5000 | Mar-05 |
| 4030010484045 | SHACKLE ASSY | 1500 | Jun-Oct 05 |
| 4030010484046 | GRAB HOOK ASSY | 4700 | Mar-05 Aug-06 |
| 4030010484047 | GRAB HOOK ASSY | 3200 | Apr-Nov 05 |
| 5340000408219 | STRAP,WEBBING | 2000 | Mar-Jul 05 |
| 5340009370273 | STRAP,WEBBING | 11293 | Jan-Oct 05 |
| 6645011083457 | TIMING MOVEMENT,MEC | 1500 | Jan-May 05 |

***Adeline Gray (from page 13)***

Since that day more than sixty years ago many hundreds of thousands of personnel jumps have been made with nylon parachute canopies, both in tactical assaults and to also save lives in emergency bailouts.

In the 1950s sport parachuting started and grew phenomenally. Now termed skydiving, parachutists can be found worldwide.

Way to go, Adeline.

*We are proud to feature articles by the renowned para-historian Jim Bates. His articles featured in this magazine provide a historical perspective on the evolution of Aerial Delivery.*



# LOW COST CONTAINER NOW AVAILABLE!

What's white, low-priced, and easy to tie up? It's the new Low Cost Container that has recently become available as a one-time use, low-cost replacement for the A-22 cargo container. The Low Cost Container, or LCC, is the first of three components developed as part of the Low Cost Aerial Delivery System to be available to the field.

The Low Cost Container is roughly 60% cheaper than the current A-22 container, costing the user about $200, rather than $480 for the standard A-22. The cost savings is due to the use of light polypropylene webbing rather than the nylon webbing used for the A-22, and a simplified design that uses less material. Hardware has been reduced to a minimum, with only 2 friction adaptors and 4 D-rings. The container is so easy to rig that no training is needed for troops used to the more complicated A-22.

*Two CDS loads land on Drop Zone under G-12 parachutes.*

The need for low cost aerial delivery components for use in humanitarian and re-supply missions was identified years ago, during the Operation Provide Promise airdrops in Bosnia. Over $31 million of standard airdrop equipment was used and never recovered. As a result, stocks of Container Delivery System (CDS) components were greatly depleted.
In response to the crisis, a few members of the Aerial Delivery Directorate at the U.S. Army RD&E Center, Natick, MA came up with the idea of a light, easy-to-rig container, suitable for one-time use applications, that could be used for both high and low velocity CDS airdrop. It would be an inexpensive alternative to the A-22 cargo container, which uses metal hardware and multiple straps of nylon webbing to contain a CDS load, and can be repaired and re-used as many as 30 times.

*Sixteen CDS loads released simultaneously from a C-17 aircraft.*

The Natick team decided to minimize the cost to the user by reducing both unit price and rigging time.

Cheaper fabrics and a simpler design were used to fabricate a container that did not have the durability of the A-22, but promised to be a perfect one-time use alternative. Preliminary testing of the low-cost cargo bag showed excellent results. However, once Operation Provide Promise ended, the changes were shelved.

In Oct 01, Operation Enduring Freedom started in Afghanistan, and again there was an increase in demand for CDS to supply Special Forces and Ranger units and provide humanitarian relief. Again the equipment was non-recoverable, resulting in expensive losses that greatly depleted Army War Reserves.

In Apr 02, the Low Cost Aerial Delivery System (LCADS) program started, with the task of developing a suite of inexpensive airdrop components to be used as one-time use replacements for CDS components. At long last, the LCC had its chance to excel. Over 300 LCCs were tested, containing loads weighing between 500 to 2,200-lbs, both in Low Velocity environments (500 to1,200-ft AGL) with the standard G-12 chute, and High Velocity (15,000 to 25,000-ft AGL) environments with the standard 26-ft ringslot chute. The container performed without a single failure. Said Pete Stalker, one of the original team who designed the LCC, "it's a good feeling to give the field such a great product. They needed it, and I'm glad we were able to provide it."

Rigging procedures for the LCC can be found in the Humanitarian Manual, "Airdrop of Supplies and Equipment: Humanitarian Airdrop", C1, FM 4-20.147/TO 13C7-37-31, Chapter 3. NSN for the LCC: 1670-01-523-7246.

*Nina Shopalovich is a member of the PM FSS Cargo Airdrop Support Team, and LCADS Project Lead*

# Adeline Gray - Parachutist

Before being a mother of three Adeline Gray had a life of different excitement - a life in aviation as a pilot with a plan to fly for her country during wartime. Ultimately, in lieu of that wish she served her country as a parachute rigger and test parachutist.

Born and raised in Seymour, Connecticut, the young woman had an early interest in being a flyer. An omen of part of her future happened as a child when she used umbrellas to jump from a barn roof into a hay-mow on her family's place in nearby Oxford. Her mother made her stop those "make believe" leaps when the family's umbrellas were ruined. By age twelve Adeline learned about Joe Crane, a famous parachutist, and decided she wanted to be a parachute jumper. But first there was schooling and growing up. Her interest in the sky continued with a lot of after school kite-flying. After her "dare-devil" umbrella escapades she went on with formal education until she graduated from Seymour High School with honors.

At age nineteen Adeline overcame her parents' objections to her plans for a risky future and persuaded them to let her enroll in a student flying course at the New Haven Municipal Airport. She promptly got a job in a ten-cent store to pay for flying lessons. Though her folks kept discouraging her interest, her father, admiring her persistence, nonetheless drove her to and from the airport for the twice-weekly instructions.

Adding to that aircraft instruction she also learned parachute packing and the theory of jumping from a professional jumper. The idea of being a parachutist still intrigued her.

Her goal in flight training was to log 200 hours of flying time and training in the many topics needed for qualifying as a federally licensed commercial pilot. That would make her eligible to join a federal government wartime program as a ferry command pilot of military aircraft in the States and to overseas bases. World War II was in full progress and women were needed so male pilots could fly in combat rather than being confined to moving badly needed planes from one place to another.

She slowly garnered hours in the air, flying within three miles of the airfield and only on Sundays, and spent time in airport classrooms. She also carried on with learning about parachutes and planning for her first jump. Her jumping instructor told her she was crazy - that he didn't think a woman would make a good jumper. But she persuaded him otherwise.

When those latter studies were done three months later (three young men also went through the course) she applied to the state of Connecticut for permission to make a jump, then had the parachute she was to use inspected and approved by state authorities. Though parachutes had been in use for nearly twenty years by that time there were not many civilian jumpers and authorities required bureaucratic rigamarole for an ordinary citizen to make make a jump purely for recreation or an exhibition. (The first intentional freefall jump with a manually operated parachute was made on April 28, 1919 and the first emergency bailout with a freefall rig had been made by military test pilot Lt. H. Harris on October 22, 1922.)

In 1937, at age 19, educated and trained in parachute theory and usage, Adeline was ready for her first jump - the last qualification to be met to be a licensed parachutist. One more time her parents, who accompanied her to the airport, tried talking her out of her plan, with no luck. Adeline's mind was set. She quickly put on her equipment and strode to her waiting plane and pilot. A state inspector was on hand to witness her effort.

At 2,000 feet, and at the pilot's command, she dove head-first into space. She fell at increasing speed, tumbling for seconds, then pulled the ripcord. The parachute canopy spilled quickly, filled with air, and a wrenching jolt stopped her fall. Air was abruptly and forcefully expelled from her lungs. She heard herself grunt loudly. With that mighty exhalation, Adeline felt relieved at her sudden stop. She was astonished at the silence during her descent and the vast panorama below as she kept lowering. Confused by the magnitude of the strange new vista, she tried to identify the airfield among the fields and forested areas and the nearby city. Then she could see the airport that, she was steadily drifting away.

She immediately was elated by her success and knew she would jump again. She landed safely off the airport, but she had earned state authorization as a parachutist. She made several other jumps, earned money as a parachute rigger, and two years later she was invited to make jumps at the 1939 Cleveland Air Races. Then she became a member of Dutton's Sky Devils as a parachutist in their air show circuit in New England and New York.

In December 1941, just after Pearl Harbor was attacked and America entered World War Two, Adeline was hired by Pioneer Parachute Company in Manchester, Connecticut as a parachute rigger. Pioneer, in conjunction with Cheney Mills, also of Manchester, was planning to make personnel parachute canopies using Cheney's nylon fabric (made of a Dupont synthetic filament it named "nylon") to replace silk material rapidly becoming unavailable from Japanese-controlled Asian locations.

***Adeline Gray (from page 12)***

In earlier days cotton fabric had widely been used to make hemispheric parachute canopies. It served well for years but had many shortcomings. In time aeronautic laboratories developed improved cotton yarn that could be made into high-strength, low-weight parachute fabric. In the 1920s filaments produced by silkworms was found to be superior in many respects to cotton yarn, and parachute fabric thereafter made of stronger, more flexible, lighter-weight cloth made of silk. The majority of silk filament was produced in the Orient where silkworms were readily raised and could feed on the leaves of mulberry trees, ultimately making dense cocoons from which lengthy filaments could be drawn to create silk yarn convertible into fabric.

The end of sources of high-volume silk filament production stimulated intensive searching for synthetic substitutes. Lab researchers at Dupont developed what they called "nylon" and introduced silk hosiery at the 1939 World's Fair in New York City. The rest is history.

Synthetic materials had already been used to make rayon cargo parachutes, but they were unsuitable for human passengers. More than twenty tests of nylon canopies had been done using heavyweight dummies and over a wide range of deployment speeds, but a "live subject" trial was needed for military acceptance.

Adeline, noted for her parachuting, and a Pioneer employee, volunteered to make a test jump before an audience of fifty critical army and navy observers. It went as planned on a sunny day at Brainard Field, an airport adjacent to the western edge of the Connecticut River in Hartford.

# Equipment Forecast

PARACHUTE

| NSN/NIIN | ITEM NAME | QUANTITY |
|---|---|---|
| 1670010272900 | SLING, CARGO, AERIAL | 1000 |
| 4020010476814 | FIBER ROPE | 2000 |
| 1670012595932 | PARACHUTE ASSY | 407 |
| 1670008426109 | PARACHUTE, CARGO | 3095 |
| 1670010272902 | SLING, CARGO, AERIAL | 1600 |
| 1670010167841 | PARACHUTE, CARGO | 265 |
| 1670010644928 | CENTER LINE | 1700 |
| 5340013646335 | STRAP, WEBBING | 1000 |
| 1670008152727 | DEPLOYMENT BAG PARA | 950 |
| 1670010078563 | RISER EXTENSION, PAR | 25000 |
| 1670003600475 | RISER EXTENSION, PAR | 50 |
| 1670012350923 | DEPLOYMENT BAG PARA | 295 |
| 1670001686065 | HARNESS, PERSONNEL | 336 |
| 5340000408219 | STRAP, WEBBING | 2000 |
| 1670014996573 | PARACHUTE PERSONNEL | 100 |
| 4020001685954 | FIBER ROPE ASSY | 838 |
| 4020010476815 | FIBER ROPE ASSY | 1000 |
| 1670010583810 | NET CARGO | 420 |
| 1670010078559 | CANOPY PARACHUTE | 30 |
| 4020013383308 | ROPE ASSY, INSERT | 140 |
| 1670007084473 | RISER EXTENSION, PAR | 10000 |
| 1670000867780 | PACK, PERSONNEL PARA | 4000 |
| 1670014364798 | PACK, PERSONNEL PARA | 2474 |
| 1670012277992 | HARNESS PARACHUTE | 5381 |

HARDWARE

| NSN/NIIN | ITEM NAME | QUANTITY |
|---|---|---|
| 1670013697914 | RELEASE, RIPCORD ASSY | 238 |
| 1670000928661 | SEPARATOR | 167 |
| 5340003776642 | SNAP HOOK | 5100 |
| 1670015039819 | CLAMP | 1050 |
| 7920015027539 | BRUSH, WIRE BRISTLE | 200 |
| 1670013070534 | SLIDE, TOGGLE LOCK | 100 |
| 1670013303282 | RIPCORD,PARACHUTE | 550 |
| 1670013303282 | RIP CORD, PARACHUTE | 1500 |
| 1670000634500 | RIP CORD, PARACHUTE | 200 |
| 1670013336082 | TIE DOWN, CARGO | 700 |
| 1670013041057 | PANEL ASSEMBLY | 500 |
| 1670015080402 | CONNECTING LINK | 375 |
| 1670014689174 | RIPCORD MODIFIED | 5000 |
| 1670012595932 | PARACHUTE ASSEMBLY | 407 |
| 4030006788562 | SHACKLE | 3800 |
| 6150013904711 | CABLE ASSY, POWER | 822 |